

## CLIMATOLOGICAL DATA FOR JANUARY, 1911.

## DISTRICT No. 6, MISSOURI VALLEY.

MONTROSE W. HAYES, District Editor.

## GENERAL SUMMARY.

The month opened with a pronounced atmospheric disturbance over the lower part of the drainage area, and a wave of high pressure, accompanied by fair and cold weather, over Montana and North Dakota. The disturbance gave snow and rain in the lower two-thirds of the district on the 1st and 2d. This was followed by a period of low temperature and generally fair weather, caused by the high pressure, which moved in a south-easterly direction from Montana and North Dakota between the 1st and the 4th, giving temperatures of zero or lower at every station in the district. During the remainder of the month there were several marked areas of high pressure, but they did not cause the cold weather they usually do, and there were numerous atmospheric depressions that moved across all or a portion of the district without giving the customary amount of precipitation. Hence, in a considerable portion of the district, or all except North Dakota, a small part of South Dakota, and the mountainous country, most of the month was warm and dry. The sunshine was deficient except in a few localities in eastern Nebraska, in northeastern Colorado, and southeastern Wyoming. In Montana and North Dakota very little outside work was done on the Government irrigation projects, but in Wyoming, South Dakota, and Nebraska the conditions were not unfavorable for some classes of construction work. In the remainder of the district more than the usual amount of outside work was possible.

## TEMPERATURE.

The mean temperature for the month was below the normal in all of Montana, except that part drained by the Madison and Jefferson Rivers and over the headwaters of the Yellowstone River; it was below the normal also in North Dakota and at a few places in northern South Dakota. Along the Canadian border the departure was pronounced, and at Havre, Mont., it amounted to a daily average of more than  $10^{\circ}$  below the normal. In Wyoming, Colorado, most of South Dakota, and in all of the drainage area lying to the south and east of those States there was a general excess in the mean temperature that ranged from  $1^{\circ}$  to  $6^{\circ}$ , and in a few cases slightly higher. The cold period that covered the first four days of the month was the only one that was well defined. During this period the lowest temperature recorded was  $54^{\circ}$  below zero at Norris, in the Yellowstone National Park, and readings lower than zero were made at all other stations except one in Larimer County, Colo. In Kansas and Missouri the 10th, 11th, and 26th were the warmest days; in the remainder of the district the 31st was the warmest. The highest temperature recorded was  $80^{\circ}$  at Russell, Kans., on the 10th.

## PRECIPITATION.

The greatest deficiency in precipitation was over the watersheds of the Osage and Gasconade Rivers and along the Missouri River below Kansas City, where the total for the month ranged as low as 10 per cent of the normal amount. In North Dakota and the mountainous country of Montana, Wyoming, and Colorado there was somewhat more precipitation than ordinarily occurs in January. In the remainder of the district there was a deficiency that was fairly general, but small. In Iowa, Kansas, and Missouri the greater part of the precipitation occurred on the 1st, 2d, and after the 13th. In Nebraska there was general rain and snow on the 1st and 2d and local falls through the remainder of the month. In other parts of the drainage area the falls were well distributed through the month. There was a sleet storm in eastern Kansas and in Missouri on the 13th and 14th, which interfered to some extent with transportation and telegraphic and telephonic communication. Practically all stations had snow, but the amounts were light, except in the mountainous country of Colorado and Wyoming, in the Black Hills of South Dakota, and in Montana. At the end of the month very little remained on the ground in the plateau country except in Montana, and there was none remaining in the lower territory to the eastward.

## MOUNTAIN SNOWFALL.

*Montana.*—The snowfall during January was above the normal throughout the greater portion of the State, and at the close of the month most of the valley and plains sections were covered to a depth of 6 to 10 inches. There were two or three short periods of daily thaws and nightly freezes that had the effect of solidifying the snow; the thaws caused no run-off except at low altitudes. At altitudes of 5,000 feet and more the depth on the ground ranges from 2 to 10 feet in the timber, where no drifting has occurred. In many places where there are no forests or windbreaks much of the snow has been swept from the windward slopes into the gulches. Present conditions indicate a normal flow of water during the coming season.—*R. F. Young, Section Director.*

*Wyoming.*—The stations in the Bighorn Mountains have nearly normal depths, and the forest ranger at Hunters Station reports the snow in excellent condition to be conserved till late summer. In the Medicine Bow and Sierra Madre Mountains, at the headwaters of the Laramie and Platte Rivers, the depths have increased very much during the month and on the 31st nearly a normal depth was on the ground. There seems to be less at the headwaters of the Green River than in any other mountain district of the State.—*W. S. Palmer, Section Director.*

*Colorado.*—Over the South Platte watershed the majority of stations had somewhat more than the normal

fall during the month. At the end of the month the average for the snow scales on the South Platte watershed was 12 inches, or 2 inches more than at the close of last January, and the average for the scales on the North Platte watershed was 17 inches, or 3 inches more than at the close of last January. Considerable drifting occurred. Although there were some low temperatures, high day temperatures were a feature, facilitating the settling of the snow. Rain, an unusual thing in Colorado in January even at low altitudes, was reported from a number of high level stations.—*F. H. Brandenburg, District Forecaster.*

*South Dakota.*—At the close of the month 12 to 15 inches of snow remained on the ground in the Black Hills.—*S. W. Glenn, Section Director.*

#### RIVERS.

All streams were low at the beginning of the month. During the first few days a slight rise set in and it was gradual in the Missouri River below Omaha through the month. However, on the 31st the stages were still moderately low. There was considerable floating ice in the lower Missouri during the first 10 days of the month.

#### DEFORESTATION AND RAINFALL.

The following is an extract from the Rapid City (S. Dak.) Daily Journal, February 4, 1911:

*The Editor of the Journal:*

I have perused with considerable interest the letter entitled "Shall our forest reserves be reopened?" by John F. Wight, in your last Sunday's edition. Mr. Wight's points are well taken and worthy of careful consideration. It would seem that the policy of the Interior Department in opening the cultivable areas in the reserves to settlement as fast as the necessary surveys can be made, so that in the end the reserves shall contain only forested land, will remove much of the present cause of complaint, and if Mr. Wight's statistics regarding the output of timbering are correct—that is, that all the merchantable timber will be removed in 30 years—surely such a rate ought to be at least fairly satisfactory to those who would remove the timber at once with no regard for the supply of the future. In my opinion, the development of a scientific system of forestation of hill and mountain regions not suited to agricultural purposes and of reforesting cut-over timberland, protection from fires, and selection of matured timber only for cutting where practicable, is a subject worthy of the most careful consideration. Friction must naturally develop at points where other interests conflict, for instance, where there is a question as to whether or not a given area is better suited for agricultural purposes, but such conflicting interests are inevitable and must necessarily be adjusted as their merits appear from time to time.

But many and desirable as I consider the advantages of a scientific forestry system to be, I must, as a student of meteorology, dissent from sharing Mr. Wight's optimism as to the climatic advantages depending on the covering of a portion of the country with forests. He says in his paragraph on the "Black Hills": "Without the forest protection the rainfall would diminish over 50 per cent, the surface of the hills would easily erode and wash down the watercourses, causing destructive floods; springs and streams would dry up in the summer and fall, irrigation would be crippled, artesian wells would no longer exist, and farming would depreciate."

This control of the forests over precipitation and run-off has long been a subject of dispute, and the affirmative side of the question is being maintained with great vigor at present on account, largely, of the fact that any system of purchase of lands by the National Government for purposes of reforestation must proceed on the theory that such reforestation, by increasing the rainfall or regulating the flow of navigable rivers, or both, will constitute a part of the exercise by the Federal Government of its prerogative of making laws for the benefit of commerce on navigable rivers. Meteorologists, generally, hold to the opinion that the effect of forests on rainfall is usually a negligible quantity. I will present as briefly as possible some of the more cogent arguments and apt illustrations on which this view is predicated.

Precipitation depends on three factors—the presence of moisture in the air, dust particles on which it may condense, and a cooling below the temperature of the dew point; that is, to a temperature so low that the moisture present is condensed. The dust particles are practically always present in sufficient numbers, so the question resolves itself into one of the quantity of moisture in the air and the temperature.

Forests can increase the precipitation, then, in one of two ways only, by supplying moisture to the air or by reducing the temperature. Now, it is a fact that the air within forests is generally cooler in summer than that in the open, but there is no evidence that this cooling extends above the tops of the trees to any great height; in fact, the cooling tends to cause a downward motion of the air within the forest, which in turn tends to dissipate fog or cloud instead of forming them. Then, again, trees do give off moisture by transpiration through their leaves. This process is most active, however, on hot, dry summer days, and diminishes when the degree of moisture in the air approaches that necessary to cause rain. Again, the air is in constant motion, and the moisture given off in a succession of hot days will soon be hundreds of miles away. There are one or two localities known where the moisture supplied by evaporation from a small valley hemmed in by mountains is condensed as the air rises along the mountain sides and falls again and again on the same region, but that is only possible where the tops of the surrounding mountains are above the general level of rain clouds. As a general proposition, a forest would have to be of vast extent to assure that any considerable portion of the moisture supplied by it to the air would fall again within its limits.

As regards local conditions, the elevation is the true explanation of the increased precipitation in the hills. An examination of a chart of normal rainfall shows that the rainfall decreases from the Gulf of Mexico north and west; that in the eastern part of South Dakota it is about equal to that in the Black Hills. It continues to decrease westward till the influence of the hills is encountered and again decreases from the hills westward till the Rockies are crossed. To say that deforestation would decrease the rainfall 50 per cent is equivalent to saying that without the forests the hills would have less rainfall than other adjacent localities which have never been forested.

In this connection two or three illustrations are pertinent. In the arid areas of Arizona and New Mexico are a number of petrified forests. These forests were not removed, yet the rainfall has decreased to from 3 to 6 inches per annum in those localities. Prof. Ellsworth recites that in the Lop Basin in Central Asia, "poplar forests which once extended for scores of miles now form wastes of branchless dead trunks like gaunt, gray skeletons, and beds of dead reeds cover hundreds of square miles. The supply of water has diminished and therefore the forests have died."

Perhaps Mr. Wight remembers the disastrous flood a couple of years ago which so greatly damaged the Crouch line. And all of this damage by flood was within the forest. There is, of course, no question as to the advantage a forested area, even though this advantage may be greatly exaggerated, as I believe it usually is, has over a bare denuded area in conserving moisture; but the most recent and careful investigations tend to show that a well cultivated area of equal extent will conserve more moisture and act as a better regulator of stream flow than a forest.

Much is written regarding the greatly increased damage by floods in recent years due to deforestation; no suggestion is made, however, that much of it may be due to the enormous increase of destructive property in the course of the floods. In discussing the increased height of floods and the diminished flow of streams in seasons of low water, another factor is ignored by advocates of forestation for stream control; the fact that all, or nearly all, of this change may be accounted for by the better drainage to which agricultural lands in these river valleys is subjected. Water which used to stand for weeks on "old bottom lands" is now drained off in a few hours. When due consideration is given to this element in the discussion of flood conditions there will be left, in my humble opinion, but little blame to attach to deforestation.

In conclusion, I would say to advocates of forestation: Protect, develop, and extend the forests, where such extension may appear wise, for their timber, fuel, and shade, as parks and hunting preserves, and as a profitable use of land unfitted for agriculture, and by State or Nation, or both, as conditions may warrant, and with all such plans and efforts I am in hearty sympathy; but I am assured that any extensive policy of reforestation with a view to its effect on climate, or on the control of floods and droughts, is destined to bring certain disappointment.

Very respectfully,

GEORGE V. SAGER,  
*Observer, Weather Bureau.*

TABLE 1.—Climatological data for January, 1911. District No. 6, Missouri Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Sky.			
<i>Wyoming.</i>																			
Arapahoe.	Fremont.	2																	
Barnum.	Johnson.	5,500	6																
Basin.	Bighorn.	3,862	12	24.0	+ 7.1	56	9	-11	13	41	0.65	+ 0.14	0.20	7.0	4	23	3	5	w.
Bennett.	Carbon.	2									0.08	- 0.20	0.05	1.5	2				s.
Casper.	Natrona.	5,101	2	32.6		59	30	-26	2	48	0.50		0.20	5.0	3	12	16	3	sw.
Centennial.	Albany.	8,074	8	32.6		44	31	-24	2	29	0.02	+ 0.92	0.53	22.4	14	4	5	22	w.
Cheyenne.	Laramie.	6,088	40	31.8	+ 6.2	59	31	-19	2	35	0.49	+ 0.09	0.36	5.1	3	12	13	6	sw.
Chugwater.	do.	5,282	10	32.6	+ 4.5	64	30	-17	2	44	1.05	+ 0.41	0.50	10.5	3	10	19	2	w.
Clark.	Bighorn.	4,320	5	26.9		55	30	-19	13	49	1.56		0.47	19.5	11	8	9	14	w.
Cody.	do.	5,000	4	22.8		55	31	-23	2	43	0.40		0.20	4.0	2				sw.
Crazy Creek.	do.	6,828	17	16.6		40	25	-46	2	54	3.05		0.80	37.0	18	4	7	20	nw.
Dome Lake.	Sheridan.	8,821	3	16.7		40	30	-29	2	55	3.35		0.90	33.5	9	16	7	8	sw.
Douglas.	Converse.	4,793	2	28.2		62	31	-13	24	46	0.60		0.18	2.0	6	21	8	2	w.
Dubois.	Fremont.	6,909	4	24.3		46	31	-32	2	38	1.15		0.80	27.0	6	22	5	14	n.
Eatons Ranch.	Sheridan.	4,600	6	28.2		65	30	-23	24	57	2.70		0.40	12.2	5	14	8	9	sw.
Echeta.	Crook.	4,200	2								1.15		0.78	45.0	8				sw.
Elk Mountain.	Carbon.	6									2.25								
Encampment.	do.	7,322	2	21.2		46	31	-29	24	41	1.33		0.80	18.0	10	12	6	13	sw.
Ervay.	Natrona.	6,400	2	26.4		51	30	-19	2	33	0.37		0.20	5.0	4	12	10	9	sw.
Fort Laramie.	Laramie.	4,270	33			50	30	-32	2	52	1.38		0.48	29.0	7	21	5	5	w.
Hunters Station.	Johnson.	8,000	5	22.1		50	30	-32	2	52	0.60		0.40	6.0	2	12	7	12	w.
Hyattville.	Bighorn.	4,632	12	27.8	+ 3.6	60	30	-21	2	57	0.55		0.20	5.5	5	18	7	7	sw.
Jireh.	Converse.	5,050	1			55	31	-22	2	52	0.54	+ 0.03	0.23	9.5	5	17	7	7	sw.
Kirtley.	do.	7	24.6	+ 2.0	55	31	-22	2	52	0.36		0.17	4.0	5					sw.
Knowles.	Crook.	4,500	2								0.77		0.40	8.2	5	21	7	3	w.
La Grange.	Laramie.	4,510	1								0.77		0.20	11.2	3	16	4	5	sw.
Lander.	Fremont.	5,372	19	28.1	+ 10.7	61	30	-26	2	54	0.23		0.20	2.9	3	11	16	4	sw.
Laramie.	Albany.	7,188	20	26.4	+ 3.9	52	31	-24	2	39	0.88	+ 0.59	0.88	9.0	1	22	6	3	sw.
Lokahama Ranch.	Bighorn.	7,052	7	19.8	+ 0.8	41	30	-30	5	46	1.99	+ 1.17	0.45	31.0	9	2	5	24	w.
Lovell.	do.	3,825	6	23.2	+ 5.0	60	30	-19	2	47	0.15		0.05	1.5	4	13	6	12	n.
Manville.	Converse.	5,050	1								1.20		0.30	12.0	5	21	6	4	sw.
Newcastle.	Weston.	4,319	4	24.0		60	30	-28	2	48	0.75		0.20	7.5	5	11	14	6	sw.
Pathfinder.	Natrona.	5,735	5	28.4	+ 2.3	53	31	-18	2	36	0.15		0.20	13.5	3	21	8	2	sw.
Phillips.	Laramie.	4,900	8								1.05	+ 0.42	0.40	10.5	6	5	25	1	w.
Powell.	Bighorn.	4,376	4	21.2		58	30	-23	2	48	0.13		0.05	2.5	4	14	11	6	sw.
Rawlins.	Carbon.	6,748	9	24.8	+ 1.8	41	31	-23	2	27	1.04	+ 0.45	0.24	15.7	7	11	11	9	w.
Saratoga.	do.	6,785	13	24.4	+ 3.0	49	31	-29	2	56	1.08	+ 0.29	0.42	22.0	5	10	7	14	sw.
Sheridan.	Converse.	3,790	16	19.6	+ 0.2	57	19	-27	2	62	1.39	+ 0.52	0.50	13.3	9	10	6	15	sw.
Shoshone Dam.	Bighorn.	5,385	5	27.9		52	30	-18	2	46	0.32		0.16	7.5	3				sw.
Soldiers Home.	Johnson.	4,635	19	26.6	+ 3.2	59	30	-25	24	63	1.54	+ 1.07	0.60	15.5	6	5	25	1	sw.
South Pass City.	Freemont.	7,873	9	16.5		38	13	-33	2	40	3.66		1.20	26.1	12	7	10	14	sw.
Thermopolis.	do.	4,350	7	25.8	+ 3.3	63	30	-32	2	60	0.18		0.11	2.5	3	21	8	2	sw.
Upton.	Weston.	2									0.48		0.25	4.8	3	9	13	9	s.
Valley.	Bighorn.	6,500	2								0.59		0.20	10.0	4	8	20	3	w.
Verona.	Sheridan.	4,360	2								1.31		0.50	13.1	6	2	24	5	sw.
Wiant's Ranch.	Carbon.	7,400	1								1.47		0.55	19.8	8	7	17	7	sw.
Wylene.	Bighorn.	5,375	2																sw.
Wyncote.	Laramie.	4,207	4	30.4		73	19	-16	3	51	0.50		0.26	9.4	3	15	11	5	sw.
Yellowstone Park.	Yellowstone Park.	6,200	23	20.8	+ 3.2	40	30	-26	2	34	4.56	+ 2.32	0.86	45.5	12	3	6	22	s.
(1) Fountain.	do.	7,220	5	16.0		46	13	-42	2	47	4.44		0.86	36.0	17	13	6	18	se.
(2) Gallatin.											3.14		0.68	31.4	12	10	2	19	n.
(3) Grand Canyon.											0.50		0.84	65.9	21	9	6	16	sw.
(4) Lake Yellowstone.											0.50		0.32	40.0	18	9	0	22	s.
(5) Norris.											0.50		0.90	57.0	13	0	3	28	w.
(6) Riverside.											0.50		0.70	5.70	1				sw.
(7) Soda Butte.											0.50		0.70	29.5	15	8	4	19	sw.
(8) Sylvan Pass.											0.70		0.72	29.4	16	5	1	25	sw.
(9) Thumb.											1.23		0.32	40.0	18	8	0	23	sw.
(10) Tower Falls.											0.40		0.40	38.0	13	9	0	22	sw.
(11) Upper Geyser Basin.											1.20		0.87	20.0	6	15	6	10	sw.
<i>Montana.</i>											1.20		0.87	20.0	6	15	6	10	sw.
Adams.	Dawson.	3	7.8			40	20	-29	24	55	0.12		0.12	2.0	1	11	6	14	nw.
Adel.	Cascade.	5,200	13	20.4	- 1.6	44	15†	-37	12	51	1.35	+ 0.31	0.40	13.5	9	15	5	11	w.
Agricultural College.	Gallatin.	4,700	14	21.2	- 0.3	48	30	-24	2	43	1.77	+ 0.97	0.37	21.2	8	7	9	15	sw.
Augusta.	Lewis and Clark.	4,071	13	14.8	- 6.9	49	4	-35	12	50	0.75	+ 0.08	0.30	7.5	5	18	5	8	w.
Babb.	Teton.	4,461	5	10.4		37	15	-40	13	60	3.04		0.99	49.3	12	9	15	7	sw.
Bald Butte.	Lewis and Clark.	6,500	2								1.80		0.38	27.6	16	6	6	20	w.
Bigtimber.	Sweet Grass.	4,072	5	24.2		56	8	-18	12†	56	1.99		0.87	20.0	6	15	6	10	w.
Billings.	Yellowstone.	3,115	16	18.6	- 7.0	53†	10	-25	14	57	1.35	+ 0.56	0.50	0.50	6				w.
Boulder Nursery.	Jefferson.	4,920	17								0.66		0.32	8.1	4	19	1	11	sw.
Bowen.	Beaverhead.	6,060	5	13.0		36	30	-39	2	49	1.00		0.35	9.5	12	6	12	13	sw.
Brider.	Carbon.	3,664	3	22.6		56	9†	-24	2	50	0.21		0.08	7.0	4	9	10	12	s.
Broadview.	Yellowstone.	5									0.65		0.35	9.0	4	13	15	3	w.
Busby.	Rosebud.	8	14.4			46	9	-35	2	56	0.65		0.13	11.6	9	11	10	10	w.
Busted.	Sweet Grass.	4	21.0			50	9†	-30	2	53	1.55		0.39	22.8	10	13	10	8	w.
Cabin Creek.	Beaverhead.	2									0.66		0.32	8.1	4	19	1	11	sw.
Canyon Ferry																			

TABLE 1.—Climatological data for January, 1911. District No. 6—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, .01 inch or more.	Number of partly cloudy days.	Number of cloudy days.				
<i>Montana—Continued.</i>																				
Dry Wolf Camp.	Cascade.	6,000	2							1.95		0.60	23.8	7	15	8	8	n.	Mrs. R. J. Eveleth.	
East Gallatin River.	Gallatin.	6,000	3															John Eberhart.		
Ekalaka.	Custer.	11																Wm. Freese.		
Elkhorn.	Jefferson.	6,576	3	20.4	48	-36	12	46	1.65	0.42	26.2	15	9	8	14		w.	Jas. Heagan.		
Evans.	Cascade.	4,900	4	20.4	55	-31	2	63	0.90	0.40	9.0	4	16	10	5		sw.	H. Thrasher.		
Fallon.	Custer.	2,208	7	8.1	34	-30	18	2	26	0.91	0.30	1.2	20.9	4	22	5	w.	Mrs. A. C. Gifford.		
Fish Creek.	Silver Bow.	8,500	2	18.6	54	-25	17	12	1.79	0.27	23.6	7					w.	O. B. Tilton.		
Flathead Creek.	Gallatin.	6,000	2	27.4	48	-20	-23	2	52	0.95	0.40	9.5	5	13	5	13	e.	Alta Williams.		
Forsyth.	Rosebud.	2,514	6	15.0	50 <sup>a</sup>	21	-40 <sup>a</sup>	9	50 <sup>a</sup>	1.00	+ 0.27	3.0	10.0	5	14 <sup>b</sup>	15 <sup>b</sup>	ne.	W. F. Clark.		
Fort Benton.	Chouteau.	2,030	32	9.4	-8.7	54 <sup>a</sup>	5	39	11	63	-0.28	-0.31	0.16	7.0	2	5	19	sw.	Jere Sullivan.	
Fort Shaw.	Cascade.	3,500	23	14.7	54	30	-26	17	55								w.	U. S. Reclamation Service.		
Fort Harrison.	Lewis and Clark.	4,004	8	17.2	48	30	-26	17	55								Post Hospital.			
Foster.	Yellowstone.	2,124	4	14.4	50	19	-31	2	53	0.64	0.15	4.7	8	11	6	14	sw.	E. K. Bowman.		
Garnett.	Fergus.	5,500	3	19.2	42	30	-28	9	43	3.00	0.60	30.0	10	18	6	7	sw.	T. E. Scally.		
Glasgow.	Valley.	2,092	15	2.8	-5.7	38 <sup>c</sup>	3	-32 <sup>c</sup>	2	42 <sup>c</sup>	0.34	-0.12	2.0	3.4	5		sw.	W. W. Mabee.		
Goldbutte.	Chouteau.	4	8.0		45	30	-36	12	53	0.53	0.30	6.5	5	10	4	17	n.	J. Berthelote.		
Graham.	Custer.	6	19.8		48	25 <sup>a</sup>	-35	2	54	0.32	0.11	7.3	7	9	7	15	sw.	J. S. Rue.		
Grayling.	Gallatin.	6,700	6	14.5	38 <sup>a</sup>	25	-46 <sup>a</sup>	54 <sup>a</sup>	2.50	0.46	34.0	14	1 <sup>a</sup>	4 <sup>a</sup>	25 <sup>a</sup>	sw.	P. Kerzenmacher.			
Great Falls.	Cascade.	3,350	20	16.3	-8.1	50	30	-33	11	53	+ 0.62	0.41	14.0	10	15	10	6	sw.	S. H. Bauman.	
Half Moon Pass.	Fergus.	6,500	2							3.18	0.50	35.8	16	2	22	7	w.	Thos. Stigen.		
Half Way House.	Broadwater.	6,000	2							2.26	0.98	26.7	7	12	18	1	ne.	Gordon Deans.		
Harlowton.	Meagher.	4,185	4	16.4	50 <sup>a</sup>	30	-32 <sup>a</sup>	11	47 <sup>a</sup>	1.45	0.45	14.5	5	2 <sup>a</sup>	6 <sup>a</sup>	22 <sup>a</sup>	w.	Joseph Muir.		
Havre.	Chouteau.	2,505	32	1.6	-11.9	42	7	-38	2	59	1.42	+ 0.73	6.7	13	10	12	9	w.	U. S. Weather Bureau.	
Helena.	Lewis and Clark.	4,110	32	17.8	-2.2	49	30	-27	12	50	1.75	+ 0.82	5.2	15	11	5	15	sw.	Do.	
Highwood.	Chouteau.	5								0.99	0.20	12.0	10	12	10	9	sw.	W. S. McCord.		
Huntley.	Yellowstone.	3,014	5	17.8	53	30	-27	13	44	1.14	0.39	17.0	5	11	16	4	w.	U. S. Reclamation Service.		
Jones Canyon.	Gallatin.	6,800	2							3.02	0.49	43.0	11	17	0	14	ne.	Jas. McCune.		
Jordan.	Dawson.	6	6.4		47	3	-42	2	67	0.67	0.40	10.5	7				nw.	W. C. Henderson.		
Lewistown.	Fergus.	4,010	15	18.4	-3.5	48	28	-31	11	59	1.54	+ 0.62	6.2	24.5	9	10	14	7	w.	W. W. Watson.
Livingston.	Park.	4,488	15	26.9	+ 1.3	56	9	-16	2 <sup>a</sup>	51	1.65	+ 1.00	0.40	16.5	7	13	4	14	w.	W. A. Jennings.
Lorette.	Chouteau.	6	16.9		54	30	-33	11	58	1.14	0.49	11.5	4	16	4	11	w.	E. Wilson.		
Lost Horse Creek.	Meagher.	5,800	2							2.92	0.75	31.5	13	8	18	5	w.	C. M. Mason.		
Malta.	Valley.	2,240	5	-3.0	39 <sup>b</sup>	5	-39 <sup>b</sup>	2 <sup>a</sup>	52 <sup>b</sup>	0.66	0.24	7.7	6	13 <sup>b</sup>	11 <sup>b</sup>	5 <sup>b</sup>	ne.	U. S. Reclamation Service.		
Medicine Lake.	do.	1	0.2		32	7	-35	2	54 <sup>a</sup>	1.20	0.40	12.0	7				ne.	J. S. Collier.		
Melstone.	Fergus.	2,903	2							0.33	0.22	5.0	2				nw.	E. J. Parkinson.		
Mildred.	Custer.	2								0.15	0.08	6.0	4	22	8	1	nw.	Leon B. Clark.		
Miles City.	do.	2,371	20	12.6	-1.9	43	7	-24	2	50	1.58	+ 0.96	0.85	13.1	9	14	9	ne.	U. S. Weather Bureau.	
Moore.	Fergus.	5								0.60	0.28	14.0	6	7	17	7	sw.	Clyde Grove.		
Norris.	Madison.	4,845	5	27.8		49	30	-15	2 <sup>a</sup>	49	0.62	0.20	10.3	7	8	10	13	s.	Madison River Power Co.	
Nye.	Sweet Grass.	3	27.0 <sup>a</sup>		46 <sup>a</sup>	25	-20 <sup>a</sup>			2.15		2.42						sw.	F. L. Bryant.	
Olsen Creek.	Jefferson.	6,345	3							1.24	0.30	21.2	11	3	16	12	w.	Robert Olsen.		
Pipestone Pass.	do.	7,000	3														nw.	Mrs. T. Kermeyer.		
Poplar.	Valley.	2,020	26	0.6	-5.6	35	23	-32	2	57	0.40	-0.27	0.30	4.5	2	24	6	1	w.	H. M. Cosier.
Raymond.	Teton.	4,200	4	18.8		54	6	-43	11	83	0.41	0.20	3	14	10	7	9	w.	W. H. Campbell.	
Red Lodge.	Carbon.	5,548	12	21.0	-1.3	55	30	-30	2	54	1.12	+ 0.21	0.48	12.8	4	8	14	9	nw.	I. A. Draper.
Renova.	Jefferson.	4,383	13	25.4	+ 1.6	50	5 <sup>a</sup>	-18	2	57	0.95	+ 0.43	0.32	18.0	4	6	9	16	sw.	F. B. Elmer.
Ryegate.	Yellowstone.	3,640	2	23.1		55	30	-18	10 <sup>a</sup>	42	0.38	0.38	3.8	1	14	6	11	w.	H. Scherfenberg.	
Seville.	Teton.	3,980	3	6.7		42	4	-44	12	54	0.42	0.14	13.5	5	16	6	6	w.	U. S. Reclamation Service.	
Sidney.	Dawson.	1	5.5		36	7	-28	2	45	1.19	0.35	11.5	6	11 <sup>a</sup>	7 <sup>a</sup>	12 <sup>a</sup>	n.	Fred W. Arndt.		
Springbrook.	do.	10	10.9	-3.6	43	19 <sup>a</sup>	-30	2	47	0.55	-0.39	2.0	5.5	6	14 <sup>a</sup>	10 <sup>a</sup>	nw.	Mrs. H. L. Miller.		
Stearns.	Lewis and Clark.	4,500	1							2.08	1.20	40.0	4	5	5	21		nw.	J. W. Hardgrove.	
Three Forks.	Gallatin.	4,066	1															w.	M. S. Carpenter.	
Tokna.	Dawson.	2,050	6	9.4		44	28	-36	11	41	0.07	0.05	0.7	2	15	7	9	w.	U. S. Reclamation Service.	
Trail Creek.	Park.	6,000	3								1.14	0.26	32.1	13	15	7	9	w.	A. Weidenauer.	
Utica.	Fergus.	5,000	17	18.2	-4.9	50	30	-33	12	52	0.62	-0.04	10.5	5	21	6	4	w.	P. W. Korell.	
Valentine.	do.	5	8.6		47	28	-41	2	50	0.43	0.30	1.6	3	20 <sup>a</sup>	2 <sup>a</sup>	8 <sup>a</sup>	w.	B. M. Bean.		
Virginia City.	Madison.	5,880	23	22.7	+ 2.4	44	30	-18	2	52	0.97	+ 0.36	0.32	9.8	5	14	4	13	w.	M. Mailand.
Wall Rock Mountain.	Broadwater.	5,600	2							1.63	0.33	28.9	12	8	17	6	nw.	D. L. Doig.		
Warm Springs Creek.	Madison.	7,500	2							0.97	0.25	13.5	12	4	2	25	sw.	M. D. Lytle.		
Wolf Creek.	Lewis and Clark.	4,000	8								0.25	0.13	9.0	3	13	1	8	w.	A. J. Reed.	
Woodville.	Jefferson.	6,376	2							1.40	0.34	16.5	13	5	12	14	sw.	Anna Kinman.		
North Dakota.																				
Aplin.	Oliver.	4	2.2		36	28	-31	2	54	0.50	0.30	5.0	5	14	9	8	nw.	J. B. Hagelbarger.		
Beach.	Billings.	2,759	4	9.1	40	9 <sup>a</sup>	-31	2	53	0.72	+ 0.07	0.56	7.2	4	14	8	9	nw.	D. J. Steiner.	
Berthold Agency.	McLean.	2,082	14	4.2	-3.0	52	18	-30	3	69	0.66	+ 0.13	0.17	8.4	6	13	9	e.	C. L. Hall.	
Bismarck.	Burleigh.	1,674	36	2.9	-4.8	37	9	-28	2	55	1.50	+ 0.96	0.59	14.2	8	11	10	nw.	U. S. Weather Bureau.	
Broncho.	Mercer.	3	-1.0 <sup>a</sup>		35 <sup>a</sup>	29	-35 <sup>a</sup>	9	58 <sup>a</sup>	0.92	0.47	9.2	4	8	21	2	nw.	E. M. Walker.		
Buford.	Williams.	1,944	5	3.2		34	8	-34	2	57	0.30	0.20	3.0	3	13	0	18	w.	J. A. Beisel.	
Dickinson.	Stark.	2,453	18	7.3	-2.9	28	-32	3	56	0.90	+ 0.47	0.33	9.0	8	22	1	8	w.	L. R. Waldron.	
Edgeley.	Lamoure.	1,408	9	-5.4	38	9	-27	3	56	0.27	-0.05	0.13	2.7	4	6	13	12	nw.	O. A. Thompson.	
Epping.	Williams.	1,439	12	-9.6	33	9 <sup>a</sup>	-32	2	53	0.72	+ 0.07	0.56	7.2	4	14	8	9	nw.	M. A. Ugen.	
Fullerton.	Dickey.	2,759	4							1.35	0.40	13.5	10					nw.	F. O. Alin.	
Garrison.	McLean.	1	2.6 <sup>a</sup>		56	30	-19	1	49	0.20	0.20	1.7	1</td							

TABLE 1.—Climatological data for January, 1911. District No. 6—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Number of rainy days .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direc- tion.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Total.							
<i>South Dakota.</i>																						
Aberdeen.	Brown.	1,300	21	5.0	- 5.6	39	31	-30	3	57	0.65	- 0.19	0.30	6.5	3	14	5	12	ne.	D. G. Gallett.		
Academy.	Charles Mix.	12	20.1	0.0	55	25	-25	3	42	0.15	- 0.13	0.08	2.0	2	9	12	10	nw.	I. T. Lothrop.			
Alexandria.	Hanson.	1,352	22	13.5	- 1.6	53	7†	-29	2	45	0.10	- 0.48	0.10	1.0	1	15	3	13	nw.	Albert Hill.		
Ardinore.	Fall River.	3,557	2								0.40		0.20	4.0	2	20	3	8	e.	Chi., Burl. & Quincy R. R.		
Armour.	Douglas.	1,521	15																	T. J. Markey.		
Bellefourche.	Butte.	3,000	3	23.2		57	25	-20	2	53	0.20		0.09	1.7	3	6	12	13	nw.	U. S. Reclamation Service.		
Brookings.	Brookings.	1,636	22	9.8	- 2.9	45	31	-32	3	44	0.61	+ 0.18	0.24	9.8	5	11	9	11	nw.	Experiment Station.		
Camp Crook.	Harding.	3,000	19																	John H. Holsey.		
Canton.	Lincoln.	1,248	16	17.3	- 0.6	58	31	-32	3	41	0.30	- 0.21	0.15	2.0	2	9	9	13	se.	Fred Roeniger.		
Cascade Springs.	Fall River.	3,422	3	22.6		57†	30	-21†	3	46†	0.43		0.15	3.2	4	18	7	6	nw.	M. N. Bradley.		
Castlegrove.	Hamlin.	1,685	5	7.5		41	31	-29	3	46	0.19		0.05	1.9	6	12	7	12	nw.	Frank Williams.		
Centererville.	Turner.	1,224	14	16.2		61	31	-31	3	41	0.09	- 0.44	0.05	0.9	2	4	9	18	nw.	J. H. Bingham.		
Chamberlain.	Brule.	1,363	14																	O. H. La Craft.		
Clark.	Clark.	1,779	17	7.6	- 4.2	43	31	-29	3	51	0.94	+ 0.45	0.20	9.2	8	8	14	9	nw.	R. J. Swenson.		
Cottonwood.	Stanley.	2,414	3	23.1		66	25	-20	3	58	0.05		0.05	0.5	1	6	23	2	nw.	William Fuller.		
Crow Creek.	Buffalo.	1,385	2								0.17		0.16	1.8	2	19	2	10	nw.	G. G. Davis.		
Daviston.	Perkins.		2	14.0 <sup>b</sup>		55†	9	-21†	13	47 <sup>b</sup>										R. E. Grimshaw.		
Deadwood.	Lawrence.	4,535	12	26.8		58	30†	-22	2	68	0.50		0.15	4.0	6	19	6	6	sw.	Frank E. Miller.		
Deerfield.	Pennington.	6,000	2								0.92		0.21	12.9	10	16	3	12	nw.	J. O. Purinton.		
De Smet.	Kingsbury.	1,726	18	10.6	- 2.5	49 <sup>a</sup>	31	-30 <sup>a</sup>	3	46 <sup>a</sup>	0.60	+ 0.07	4.0	2	17	7	7	nw.	M. P. Dowling.			
Dumont.	Stanley.	2,250	2	22.4		65	24†	-22 <sup>a</sup>	2	65 <sup>a</sup>	0.05		0.05	0.5	1	15	10	6	nw.	A. B. Wood.		
Eales.	Potter.	6,195	2																	A. H. Peterson.		
Elk Mountain.	Custer.	4,700	2																	James E. Blaine.		
Elk Point.	Union.	1,127	12	19.7	- 1.5	53	11	-30	3	59	0.44	- 0.14	6.6	4	14	3	14	n.	G. W. Freeman.			
Ellingson.	Perkins.					59	30				0.21		0.10	1.1	3	23	0	8	nw.	A. C. Ellingson.		
Englewood.	Lawrence.	5,723	2								1.50		0.40	15.0	8	19	3	9	n.	T. J. Cummings.		
Eureka.	McPherson.	1,884	2	7.0		46	28	-26	2	55	0.41		0.25	4.5	4	17	1	13	se.	Experiment Station.		
Fairfax.	Gregory.	7	20.8			64	31	-24	3	41	0.15		0.15	1.5	1	10	12	9	s.	Frank Adams.		
Faulkton.	Faulk.	1,595	16	9.0	- 2.2	41	9†	-23	2	54	0.17	- 0.16	0.15	3.5	2	16	5	10	nw.	Miss Belle Talcott.		
Flandreau.	Moody.	1,565	21	11.8	- 1.6	51	31	-33	3	47	0.80	+ 0.39	0.40	8.0	3	11	6	14	s.	W. A. Harris.		
Forestburg.	Samborn.	1,231	19								0.30	- 0.40	0.30	3.0	1	16	6	9	se.	S. S. Judy.		
Fort Meade.	Meade.	3,624	29	26.4	+ 5.0	59	9†	-20	13	55	0.17	- 0.54	0.08	1.7	3	12	8	11	w.	Post Hospital.		
Frederick.	Brown.	1,371	3																	J. E. Jeffers.		
Gaunvalley.	Buffalo.	13	14.0	- 1.6	49	31	-29	3	43	0.70	+ 0.07	0.60	7.0	2	9	11	11	se.	V. P. Drips.			
Greenmount.	Lawrence.	6,430	2			64	31	-24	3	46	0.35	- 0.22	0.30	3.0	2	8	15	8	nw.	H. C. Hoffbuh.		
Hardy Ranger Station.	Charles Mix.	17	22.3	+ 0.6	64	31	-24	3	46	1.68		0.68	25.0	5	17	2	12	e.	T. C. Williamson.			
Harveys Ranch.	Lawrence.	6,600	2																	Jerome Harvey.		
Hermosa.	Custer.	3,278	5	26.6		70 <sup>b</sup>	30	-22	1	55 <sup>b</sup>	0.12		0.08	1.5	2	17	10	4	n.	S. M. Booth.		
Highmore.	Hyde.	1,890	15	13.0	- 1.1	56	31	-24	3	48	0.11	- 0.17	0.05	1.1	4	13	10	10	nw.	Experiment Station.		
Hill City.	Pennington.	5,067	2								0.23		0.08	3.1	4	14	14	3	n.	H. L. Jones.		
Hopewell.	Stanley.	1	19.2			64	28	-23	2	53	0.05		0.05	0.5	1	10	13	8	n.	E. R. Myers.		
Howard.	Miner.	1,564	19	11.6	- 2.2	53 <sup>a</sup>	31	-32 <sup>a</sup>	3	47	0.48	+ 0.16	0.25	5.5	4	13	5	10	se.	J. J. Cox.		
Howell.	Hand.	9	9.9			48	31	-29	3	49	0.36		0.21	3.4	5	12	9	10	n.	M. A. Shuster, Jr.		
Huron.	Beadle.	1,306	29	11.7	+ 2.2	54	31	-29	3	60	0.17	- 0.34	0.07	1.7	8	10	7	14	n.	U. S. Weather Bureau.		
Ipwich.	Edmunds.	1,530	14	6.2	- 5.5	36	21†	-30	3	49	0.45	+ 0.02	0.25	4.5	2	19	5	7	nw.	J. B. Taylor.		
Kadoka.	Stanley.	2,467	2	23.5		69	29	-21	2	58	0.06		0.02	0.6	3	13	8	10	nw.	Rev. D. S. Brown.		
Kennebec.	Lyman.	1,689	18	20.0	+ 3.1	62	25	-23 <sup>a</sup>	3	53 <sup>a</sup>	0.20	- 0.24	0.20	2.0	1	16	7	8	n.	R. C. Van Horn.		
Kidder.	Marshall.	1,295	7	5.2		38	9	-27	3	48	0.66		0.29	6.5	4	15	1	15	n.	H. C. Schussler.		
Kimball.	Brule.	1,788	22																	G. D. Rose.		
La Delle.	Spink.	1,400	14	7.8	- 5.4	47	31	-33	3	47	0.11	- 0.61	0.08	2.0	2	16	4	11	nw.	E. L. Ebbert.		
Lead.	Lawrence.	5,200	2	27.4		54	30	-29	2	67	0.57		0.09	6.0	10	12	10	9	nw.	E. F. Irwin.		
Lemon.	Perkins.	2,345	2	11.8		49	28	-26	2	55	0.45		0.30	4.0	4	14	12	5	n.	W. E. Lyman.		
Marion.	Turner.	1,447	10	16.8	+ 0.1	61	31	-26	3	54	0.33	- 0.55	0.13	2.2	4	6	15	10	nw.	M. H. Dains.		
Marston.	Sully.	3	14.0			61	31	-28	3	58	T.		T.	1	0	12	9	10	se.	J. S. Walker.		
Mellette.	Spink.	1,300	16	7.3	- 6.1	39	31	-28	3	50	0.42	- 0.01	0.18	3.1	4	17	6	8	nw.	Frank A. Howe.		
Mennos.	Hutchinson.	1,325	14	18.2	0.0	58	31	-26	3	59	0.24	- 0.24	0.24	2.5	3	9	5	17	nw.	J. H. Swanton.		
Milbank.	Grant.	1,148	20	5.6	- 7.0	39	9	-26	3	47	1.42	+ 0.85	0.70	10.2	4	14	11	17	nw.	I. T. Patridge.		
Mitchell.	Davison.	1,312	17	16.0	- 0.6	53	31	-27	3	59	0.84	+ 0.28	6.0	2	11	15	5	nw.	C. W. Downey.			
Mobridge.	Walworth.	4	4.9			44 <sup>b</sup>	30	-25 <sup>b</sup>	3†	49 <sup>b</sup>	0.12		0.05	1.2	2	17	3	12	nw.	Thos. J. Morris.		
Murdo.	Lyman.	2,300	3	21.0		68	25	-23	2	55	T.		T.	0	20	10	1	nw.	L. C. Bode.			
Oehrlichs.	Fall River.	3,339	19	23.9	+ 2.2	64	30	-22	2	49	0.30	- 0.66	0.20	2.0	1	15	14	2	sw.	J. E. Strouse.		
Orman.	Butte.	2,920	5	23.2		57	28	-20	3	58	0.06		0.05	0.7	1	14	13	4	nw.	U. S. Reclamation Service.		
Ottumwa.	Stanley.	3	19.0 <sup>c</sup>			65 <sup>a</sup>	25	-24 <sup>a</sup>	3	62 <sup>a</sup>	0.10		0.10	1.0	1	14	13	4	n.	J. W. Bretz.		
Pierre.	Hughes.	1,572	19	18.2	+ 4.3	63	28	-20	3	56	0.05	- 0.41	0.01	0.4	5	11	7	13	e.	U. S. Weather Bureau.		
Plankinton.	Aurora.	1,528	17	5.1		41	28	-28	3	58	0.60	+ 0.14	0.10	2.0	2	10	6	6	nw.	W. G. Andrews.		
Rapid City.	Campbell.	5	5.1			41	28	-28	3†	58	0.20		0.10	2.0	3	13	8	10	n.	J. H. Jones.		
Redfield.	Pennington.	3,251	23	27.7	+ 6.2	62	30	-24	2	62	0.11	- 0.33	0.07	1.2	5	11	7	13	w.	U. S. Weather Bureau.		
Rochford.	Spink.	1,295	13	7.4	- 6.1	40	28†	-28	3†	40	0											

TABLE 1.—Climatological data for January, 1911. District No. 6—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.					Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
<i>Colorado</i> —Continued.																		
Auldhurst.																		
Boulder.	Teller.	8,500	1															
Boulder.	Boulder.	5,347	15	38.6	+ 4.9	68	31	-14	2	52	0.73	+ 0.37	0.42	11.5	3	17	8	s.
Burlington.	Kit Carson.	4,160	8	35.5	.....	70	31	-19	2	46	.....	.....	0.20	3.0	3	5	25	w.
Cassels.	Park.	8,445	1															
Castle Rock.	Douglas.	6,220	19	36.0	+ 8.4	66	31	-31	2	62	0.34	.....	0.17	5.5	3	19	6	w.
Cheeseman.	Jefferson.	6,890	36	36.6	.....	65	30	-20	2	43	0.25	.....	0.13	3.8	2	17	12	s.
Cheyenne Wells.	Cheyenne.	4,279	17	35.2	+ 6.5	71	20	-18	3	55	0.92	+ 0.78	0.50	10.0	2	25	4	sw.
Cope.	Washington.	14	29.2	+ 0.2	63	12	-22	1	44	1.00	+ 0.66	0.35	9.0	4	11	13	s.	
Corona <del>ss</del> .	Grand.	11,660	4	11.2	.....	29	30	-30	3	28	3.52	.....	1.08	42.0	11	2	2	w.
Denver.	Denver.	5,272	39	38.2	+ 9.1	69	30	-17	2	53	0.12	- 0.30	0.11	1.7	2	14	15	sw.
Edgewater.	Jefferson.	5,450	37	37.8	.....	68	30	-21	2	56	0.12	.....	0.12	1.2	1	18	5	w.
Estes Park Hatchery.	Larimer.	8,000	2															
Fort Collins.	do.	4,985	29	31.6	+ 5.1	66	30†	-18	3	50	0.34	- 0.12	0.18	4.7	2	20	9	nw.
Fort Lupton.	Weld.	4,907																
Fort Morgan.	Morgan.	4,319	13	31.2	+ 6.6	66	10	-20 <sup>a</sup>	3	50 <sup>a</sup>	0.19	+ 0.07	0.10	3.2	2	13	15	w.
Frances.	Boulder.	9,300	6	25.8	.....	48	23	-14	2	24	1.20	.....	0.43	17.0	6	18	6	w.
Frys Ranch.	Larimer.	7,500	1	30.0	.....	52	25†	-20	2	36	0.65	.....	0.42	10.2	7	11	7	sw.
Georgetown.	Clear Creek.	8,550	9															
Greeley.	Weld.	4,649	20	32.8	+ 6.7	63	31	-14	3	47	0.19	0.00	0.18	2.7	2	24	6	e.
Grover.	do.	5,076	2															
Hartsel.	Park.	7,670	2															
Hawthorne.	Boulder.	6,000	2															
Holyoke (near).	Phillips.	3,745	15															
Idaho Springs.	Clear Creek.	7,534	11	32.1	+ 3.8	56	30†	-12	2	39	0.37	+ 0.04	0.24	6.0	3	4	25	w.
Keota.	Weld.	4,966																
Laporte.	Larimer.	5,053	20															
Leroy (near).	Logan.	4,380	22															
Longmont \$§.	Boulder.	4,980	10	33.4	+ 7.7	68	30	-18	2	53	0.22	.....	0.22	3.3	1	24	3	sw.
Longs Peak (near).	Larimer.	8,600	16	24.8	+ 1.0	48	29†	0	0†	44	1.21	+ 0.65	0.75	16.0	4	7	15	nw.
Lulu Pass.	do.																	
Moraine.																		
Plateau Canon.	Jefferson.	7,775	21	27.6	+ 2.5	49	31	-20	2	40	0.80	+ 0.49	0.80	9.0	1	26	3	w.
Platte.	Larimer.	5,492	12															
St. Cloud.	Sedgwick.	7,750	8															
Sedgwick.	Clear Creek.	3,573	3	30.0	.....	68	10	-23	3	52	0.33	.....	0.33	5.0	1	21	9	sw.
Sill Mine.	Jackson.	11,500	2	14.6	.....	36	31	-22	3	29	4.95	.....	0.70	57.1	16	14	6	nw.
Spicer (near).	Gage.	8,700	1															
Sterling.	Logan.	3,892	2	30.0	.....	63	10	-21	3	46	1.13	.....	0.51	13.8	9	14	8	sw.
Waterdale.	Larimer.	5,206	16	35.1	.....	68	30	-15	2	44	0.35	+ 0.12	0.48	9.0	3	24	6	se.
Wray.	Yuma.	3,512	15	34.3	+ 5.2	73	10	-21	2†	57	0.29	- 0.02	0.15	3.5	3	11	19	sw.
Yuma.	do.	4,138	20															
<i>Nebraska</i> .																		
Ainsworth.	Brown.	2,521	5	24.6	.....	60	31	-21	3	45	0.30	.....	0.23	5.3	2	1	27	3
Albion.	Boone.	1,747	20	-2.6	60	31	-30	3	51	0.30	- 0.23	0.30	3.0	1	16	2	13	
Alliance.	Boxbutte.	3,908	18	28.0	+ 3.8	65	30	-22	3	54	0.42	- 0.17	0.20	4.2	3	16	14	w.
Alma.	Harlan.	1,939	14	28.4	+ 1.1	76	10	-22	3	51	0.05	- 0.22	0.03	0.7	2	13	12	s.
Anoka.	Boyd.	5	21.6	.....	65	31	-35	3	63	0.20	.....	0.20	2.0	1	4	25	2	nw.
Arcadia.	Valley.	2,186																
Ashland.	Saunders.	1,100	25	26.0	+ 2.1	66	29	-19	3	39	0.21	- 0.38	0.21	2.5	1	17	10	s.
Aston.	Sherman.	2,061																
Atkinson.	Holt.	2,108	4	22.0	.....	62	30	-25	3	46	0.04	.....	0.04	0.7	1			nw.
Auburn.	Nemaha.	1,051	19	29.2	+ 3.5	67	29	-17	3	52	0.46	- 0.37	0.40	4.6	2	20	4	s.
Aurora.	Hamilton.	1,792	17	26.9	+ 0.9	62	31	-20	3	51	0.30	+ 0.01	0.30	3.0	1	18	9	s.
Beatrice.	Gage.	1,235	20	29.2	+ 3.8	66	29	-17	3	54	0.13	- 0.41	0.10	1.0	2	12	7	sw.
Beaver City.	Furnas.	2,147	20	30.6	+ 2.1	75	10	-22	3	62	0.17	- 0.07	0.14	2.5	2	5	15	ne.
Bellevue.	Sarpy.	1,210	28	26.7	.....	62	10	-19	3	53	0.40	- 0.54	0.40	4.0	1	18	3	nw.
Benkelman.	Dundy.	2,968	15															
Bertrand.	Phelps.	2,515	3															
Blair.	Washington.	1,122	15	24.3	+ 1.0	59	29	-19	3	36	0.05	- 0.36	0.02	2.0	3	16	9	sw.
Bloomfield.	Knox.	6	19.8	.....	61	31	-28	3	47	0.10	.....	0.10	2.0	1	9	18	4	nw.
Bradshaw.	Morrill.	1,715	13															
Bridgeport.	Custer.	3,658	14	28.0	+ 2.0	67	10†	-27	3	60	0.60	+ 0.14	0.40	6.0	2	20	6	nw.
Broken Bow.	Cherry.	2,477	17	31.0	+ 5.5	65	31	-20	3	65	0.19	- 0.08	0.11	2.5	2	18	10	3
Burge.	Hall.	2,674	5	24.8	.....	65	30†	-27	3	59	0.20	.....	0.20	2.0	1	18	10	nw.
Cairo.	do.	1,951	2															
Callaway.	Custer.	2,555	19	29.8	+ 4.5	67	31	-25	3	58	0.59	+ 0.23	0.39	7.0	2	12	11	s.
Cambridge.	Furnas.	2,258	4	30.2	.....	75	10	-24	3	60	0.20	.....	0.10	2.0	2	15	8	sw.
Canton (near).	Boxbutte.	1	25.8	.....	64	30	-26	3	58	0.62	.....	0.24	10.8	4	16	8	w.	
Columbus.	Platte.	1,442	18	25.7	+ 2.4	53	31	-20	3	55	0.30	- 0.03	0.30	3.0	1	6	16	9
Cozad.	Dawson.	2,496																
Creighton.	Knox.	1,600	12	19.2	+ 2.5	61	31	-26	3	36	0.41	- 0.27	0.30	4.0	4	7	17	nw.
Crete.	Saline.	1,368	25	27.8	+ 5.6	62	29	-18	3	60	0.05	- 0.55	0.05	0.5	1	14	12	s.
Culbertson.	Hitchcock.	2,505	23	29.4	.....	67	31	-24	3	54	0.16	- 0.18	0.12	4.0	2	20	24	sw.
Curtis.	Frontier.	2,553	13	28.4	+ 1.0	70	10	-26	3	64	0.60	+ 0.19	0.30	6.0	3	16	12	3
David City.	Butler.	1,619	22	26.6	+ 4.6	58	29†	-21	3	52	0.40	- 0.35	0.40	3.0	1	12	8	sw.
Dawson.	Richardson.	945	18	31.4	+ 3.2	64	10†	-15	3	54 <sup>b</sup>	0.60	- 0.11	0.34	....	3			nw.
Du Bois.	Pawnee.	1,074	6															
Ellis.	Gage.	1,430	6															
Elm Creek.	Buffalo.	2,268	3															
Erie.	Perkins.	3,382	3															
Enderslake.	Brown.																	
Ewing.	Holt.	1,888	19	21.0	.....	60	31	-30	3	62	0.32</							

TABLE 1.—Climatological data for January, 1911. District No. 6—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.				Observers.	
				Mean.			Departure from the normal.			Highest.			Lowest.			Departure from the normal.					
				Date.	Lowest.	Highest.	Date.	Lowest.	Highest.	Date.	Lowest.	Highest.	Date.	Lowest.	Highest.	Total.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of partly cloudy days.	Number of cloudy days.	
Nebraska—Continued.																					
Hartington.	Cedar.	1,309	20	20.6	+ 2.0	60	31	-24	3	52	0.20	- 0.56	0.15	2.0	2	8	10	13	nw.	D. E. Ewing.	
Harvard.	Clay.	1,812	23	23.4	- 0.3	60	10	-22	3	53	0.13	- 0.31	0.13	1.3	1	17	7	7	nw.	Dr. J. T. Fleming.	
Hastings.	Adams.	1,932	20	25.0	+ 0.2	70	31	-20	3	51	0.42	- 0.02	0.25	3.2	3	13	7	11	sw.	Chi., Burl. & Quincy R. R.	
Hayes Center.	Hayes.	18	31.2	—	—	75	10	-22	3	55	0.40	- 0.04	0.20	4.0	2	24	3	4	s.	C. A. Ready.	
Hay Springs.	Sheridan.	3,821	26	27.0	+ 6.4	65	30	-28	3	60	0.30	- 0.36	0.30	3.0	1	12	14	5	nw.	A. Kadlecik.	
Hebron.	Thayer.	1,458	26	28.1	+ 3.9	70	31	-17	3	40	0.10	- 0.61	0.10	1.0	1	—	—	—	—	Dr. C. M. Easton.	
Hemingford.	Boxbutte.	4,256	2	—	—	—	—	—	—	—	0.36	—	0.15	—	7	—	—	—	—	A. S. Enyeart.	
Hendley.	Furnas.	2,231	7	—	—	—	—	—	—	—	0.30	—	0.20	3.0	2	—	—	—	—	T. L. Jones.	
Hillside.	McPherson.	3	28.6	—	—	65	31	-35	3	66	0.31	—	0.19	7.0	2	14	6	11	sw.	Mrs. M. R. Lloyd.	
Holdrege.	Phelps.	2,324	21	26.6	+ 0.4	70	10	-19	3†	64	0.60	+ 0.17	0.40	6.0	2	19	3	9	nw.	Chi., Burl. & Quincy R. R.	
Hooper.	Dodge.	1,228	13	23.2	+ 0.4	60	29	-23	3	41	0.35	+ 0.02	0.30	3.5	2	—	—	—	—	Dr. W. H. Heine.	
Imperial.	Chase.	3,278	19	30.6	+ 4.3	72	10	-32	2	61	0.42	- 0.04	0.30	5.0	3	8	16	7	nw.	Robt. Malcolm.	
Kearney.	Buffalo.	2,146	22	30.7	+ 4.4	70	10	10†	25	3	64	0.15	- 0.31	0.10	1.5	2	5	20	6	nw.	N. C. Dunlap.
Kimball.	Kimball.	4,697	22	31.8	+ 4.4	63	30	-17	17	57	0.91	+ 0.48	0.45	9.1	4	10	19	2	w.	F. J. Bellows.	
Kirkwood.	Rock.	16	22.8	+ 0.7	56	18†	-26	3	44	0.15	- 0.37	0.10	1.5	2	14	12	5	nw.	Mrs. C. Arter.		
Kowanda.	Garden.	3	—	—	—	—	—	—	—	—	0.36	—	0.20	—	2	—	—	—	—	Geo. W. Hulse.	
Lexington.	Dawson.	2,385	22	28.8	+ 3.5	67	31	-5	13	48	0.60	+ 0.03	0.40	6.0	2	—	—	—	—	Robt. Chadwick.	
Lincoln.	Lancaster.	1,189	30	26.6	+ 5.4	64	29	-16	3	54	0.18	- 0.44	0.18	2.9	1	7	7	17	s.	U. S. Weather Bureau.	
Lodgepole.	Cheyenne.	3,820	12	31.4	+ 5.5	67	10	-19	2	47	0.55	+ 0.17	0.30	6.0	2	22	7	2	sw.	R. T. Kidney.	
Loup.	Sherman.	2,067	17	24.8	+ 0.3	60	10†	-28	3	45	0.10	- 0.13	0.10	2.0	1	22	5	4	n.	E. S. Hayhurst.	
Loyal.	Custer.	3,825	1	—	—	—	—	—	—	—	0.40	—	0.30	4.0	2	16	0	15	nw.	C. H. Cass.	
McCook.	Redwillow.	2,506	17	30.4	+ 2.0	78	10	-24	3	58	0.05	- 0.20	0.05	0.5	1	25	2	4	s.	Anthony Kennedy.	
McCool Junction.	York.	1,575	13	—	- 1.1	55	29†	-25	3	40	0.40	- 0.10	0.30	4.0	2	14	6	11	nw.	Joel Hull.	
Madison.	Madison.	1,585	18	21.6	—	55	29†	—	—	—	0.30	—	0.26	3.0	2	—	—	—	—	U. S. Reclamation Service.	
Marquette.	Hamilton.	1,830	31	—	—	—	—	—	—	—	0.15	—	0.15	—	1	—	—	—	—	Chi., Burl. & Quincy R. R.	
Mason City.	Custer.	2,257	11	—	—	—	—	—	—	—	0.40	—	0.30	4.8	3	6	16	9	sw.	Dr. F. A. Long.	
Minatare.	Scotts Bluff.	3,825	1	—	—	—	—	—	—	—	0.36	—	0.38	—	2	18	6	7	nw.	John Ellis.	
Minden.	Kearney.	2,169	34	26.2	+ 3.5	71	10	-23	3	55	0.36	- 0.43	0.30	4.8	3	6	16	9	sw.	J. A. Ambserry.	
Mitchell.	Scotts Bluff.	3	28.2	—	—	67	10	-18	2	53	0.38	—	0.22	7.2	2	18	6	7	nw.	U. S. Reclamation Service.	
Nebraska City.	Otoe.	941	33	28.4	+ 7.5	65	29	-19	3	54	0.30	- 0.49	0.30	3.0	1	6	16	9	sw.	Chi., Burl. & Quincy R. R.	
Norfolk.	Madison.	1,532	20	22.3	+ 3.2	60	31	-27	3	57	0.27	- 0.15	0.25	3.2	2	17	5	9	nw.	Dr. P. H. Salter.	
North Loup.	Valley.	1,961	22	23.3	+ 1.1	57	10†	-30	3	42	0.30	- 0.28	0.20	3.0	2	11	15	5	s.	W. G. Root.	
North Platte.	Lincoln.	2,841	37	27.7	+ 6.3	69	10	-22	3	56	0.28	- 0.19	0.24	5.0	3	8	14	9	nw.	U. S. Weather Bureau.	
Oakdale.	Antelope.	1,722	23	20.0	+ 1.1	58	31	-29	3	51	0.32	- 0.14	0.24	3.5	2	8	15	8	nw.	G. S. Clingman.	
Odell.	Gage.	1,278	17	—	—	61	10	-23	3	55	0.36	- 0.43	0.02	0.47	0.02	2	6	7	18	se.	Paul Anderson.
Omaha.	Douglas.	1,103	41	25.4	+ 4.9	60	29	-14	3	50	0.45	- 0.20	0.40	5.6	3	4	11	16	s.	John D. Lute.	
Orleans.	Valley.	2,062	16	—	—	—	—	—	—	—	0.06	- 0.27	0.04	—	2	13	9	9	sw.	James Milford.	
Osceola.	Harlan.	1,993	3	—	—	—	—	—	—	—	0.37	—	0.25	4.5	2	—	—	—	—	James McGeachin.	
Palisade.	Polk.	1,644	14	19.8	—	57	31	-22	3	52	0.50	+ 0.19	0.50	5.0	1	—	—	—	—	E. G. Young.	
Palmyra.	Hitchcock.	1,142	15	26.8	+ 1.5	62	10	-14	3	52	0.56	- 0.30	0.50	1.0	2	15	8	8	n.	Thos. Coles.	
Pawnee City.	Otoe.	1,75	15	29.0	—	65	10†	-15	3	52	0.56	- 0.30	0.20	2.0	1	16	5	10	s.	Frank A. Barton.	
Paxton.	Keith.	3,060	2	—	—	—	—	—	—	—	0.20	—	0.20	—	1	—	—	—	—	John Ruppel.	
Plymouth.	Jefferson.	1,419	7	25.9	—	66	31	-17	3	47	T.	—	T.	T.	0	6	9	16	sw.	John Ferguson.	
Purdum.	Blaine.	9	25.5	—	—	60	10†	-26	3	52	0.45	—	0.20	4.5	3	18	9	4	sw.	T. C. Jackson.	
Ravenna.	Buffalo.	2,028	34	26.6	+ 2.3	68	10	-25	3	42	0.55	- 0.07	0.30	5.5	2	17	8	6	sw.	H. G. Smith.	
Red Cloud.	Webster.	1,687	19	30.2	+ 3.5	75	10	-21	3	65	0.14	- 0.18	0.08	2.0	1	14	5	12	s.	Chas. S. Ludlow.	
St. Libby.	Howard.	1,887	16	—	—	—	—	—	—	—	0.40	- 0.09	0.40	4.0	1	11	11	9	sw.	W. I. Meader.	
St. Paul.	St. Paul.	1,796	16	25.8	- 0.3	61	10	-22	3	39	0.10	- 0.29	0.10	1.0	1	16	11	4	sw.	Paul Anderson.	
Santee.	Knox.	23	18.6	- 0.1	62	31	-27	1	50	0.40	- 0.14	0.30	4.0	2	16	5	10	nw.	Nat H. Neff.		
Sargent.	Custer.	2,339	12	26.8	—	65	31	-23	3	56	0.75	+ 0.16	0.50	7.0	2	—	—	—	—	J. L. Ferguson.	
Schuyler.	Coffey.	1,357	18	23.4	—	62	29	-28	3	40	0.40	- 0.05	0.40	4.0	2	7	14	10	sw.	J. T. Sumner.	
Scottsbluff.	Scotts Bluff.	3,888	5	29.6	—	66	10†	-22	3	55	0.57	—	0.30	8.0	6	21	7	3	nw.	A. B. McCoskey.	
Seward.	Garfield.	1,435	21	26.0	+ 1.0	62	29	-20	2†	45	0.30	- 0.24	0.30	3.0	1	10	14	7	sw.	Chi., Burl. & Quincy R. R.	
Sheridan.	Cheyenne.	4,090	20	—	—	—	—	—	—	—	0.06	—	0.06	—	1	21	3	7	sw.	J. M. Kenney.	
Sidney.	Keyapaha.	17	22.9	+ 1.6	62	31	-25	3	50	0.30	- 0.19	0.20	3.0	2	10	15	9	sw.	John F. Fischer.		
Springview.	Stanton.	1,472	19	21.8	+ 1.2	59	31	-28	3	36	0.45	- 0.02	0.40	4.5	2	11	11	9	sw.	C. L. Phelps.	
Stratton.	Hitchcock.	2,804	15	—	—	—	—	—	—	—	0.32	+ 0.05	0.22	3.2	2	—	—	—	—	Alfred Pont.	
Superior.	Nuckolls.	1,574	25	—	—	—	—	—	—	—	T.	- 0.51	T.	T.	0	—	—	—	—	Miss Stella Vennum.	
Syracuse.	Otoe.	1,059	18	26.8	+ 2.5	63	10†	-20	3	43	0.30	- 0.46	0.30	3.0	1	14	9	8	sw.	F. V. Bishop.	
Table Rock.	Pawnee.	1,023	22	—	—	—	—	—	—	—	0.54	- 0.04	0.34	1.0	1	5	18	4	9	s.	W. N. Hunter.
Tecumseh.	Johnson.	1,113	20	22.4	+ 0.3	61	29	-20	3	43	0.15	- 0.57	0.10	1.0	1	5	21	5	nw.	E. D. Howe.	
Tobias.	Burt.	1,060	20	22.4	+ 0.3	61	29	-20	3	43	0.15	- 0.57	0.15	0.5	2	1	5	21	5	nw.	L. E. Pratt.
University Farm.	Saline.	1,597	22	28.4	+ 3.0	64	29	-16	3	58	0.37	- 0.16	0.37								

TABLE 1.—Climatological data for January, 1911. District No. 6—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.								Observers.				
				Mean.				Departure from the normal.				Lowest.				Greatest daily range.				Total.				Greatest in 24 hours.				Total snowfall, unmeasured.				
				Date.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Date.	Lowest.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.	Greatest daily range.	Date.				
<i>Iowa—Continued.</i>																																
Inwood §.	Lyon.	1,474	7	14.4	.....	57	31	-35	3	44	0.40	.....	0.20	4.0	3	19	2	10	.....	F. B. Hanson.												
Lamoni.	Decatur.	24.6	4	24.6	.....	58	29	-12	3	42	0.91	.....	0.55	3.5	4	11	0	20	nw.	T. J. Fitzpatrick.												
Larrabee.	Cherokee.	21	16.6	-0.8	55	31	-28	3	47	0.55	-0.01	0.20	5.5	4	9	12	10	n.	H. B. Strever.													
Le Mars §.	Plymouth.	15	18.4	-0.8	50	31	-26	3	41	0.35	-0.19	0.18	.....	3	4	19	8	nw.	G. A. C. Clarke.													
Lenox §.	Taylor.	16	24.6	+ 1.3	58	28	-17	3	49	0.29	-0.47	0.20	2.9	4	16	3	12	s.	J. L. Hurley.													
Leon.	Decatur.	9	26.6	.....	57	10	-13	3	45	1.30	.....	0.75	1.8	5	9	4	18	s.	Morris Gardner.													
Little Sioux §.	Harrison.	23	23.2	.....	60	29	-27	3	43	0.40	.....	0.40	4.0	1	10	6	15	nw.	Geo. H. Gibson.													
Logan §.	do.	228	24	23.3 + 4.0	58	29	-21	3	39	0.42	-0.68	0.22	.....	3	6	16	9	nw.	Glenn H. Stern.													
Mount Ayr §.	Ringgold.	18	26.0	+ 2.7	59	10	-14	3	45	1.10	-0.14	0.60	3.0	5	6	9	16	sw.	A. F. Beard.													
Murray.	Clarke.	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. T. Ashley.												
Odebolt §.	Sac.	1356	14	21.0 + 0.6	60	31	-25	3	39	0.38	-0.03	0.20	4.0	2	20	1	10	.....	E. Starner.													
Onawa §.	Monona.	1,051	11	23.2 + 0.6	56	31	-10	2	34	0.53	-0.13	0.30	5.3	5	13	1	17	nw.	C. G. Perkins.													
Pacific Junction §.	Mills.	960	12	25.0 + 1.7	62	29	-20	3	47	0.22	-0.32	0.21	2.2	2	7	17	7	s.	H. H. McCartney.													
Rock Rapids §.	Lyon.	1,358	12	14.2 + 0.3	52	31	-31	2	44	0.50	-0.09	0.30	5.0	6	.....	.....	.....	.....	.....	W. C. Wyckoff.												
Sheldon §.	O'Brien.	1,422	11	16.0 - 1.6	48	10	-32	3	38	2.00	+ 1.41	1.00	17.0	5	18	6	7	nw.	Dr. A. W. Beach.													
Sibley.	Osceola.	1,212	18	-2.7	53	31	-33	3	48	1.56	+ 1.02	0.50	10.0	6	8	9	14	sw.	H. G. Doolittle.													
Sioux Center §.	Sioux.	12	15.6 - 2.3	54	31	-27	3	46	0.60	+ 0.12	0.30	6.0	3	12	4	15	nw.	J. de Ruyter.														
Sioux City.	Woodbury.	1,135	22	19.6 + 4.0	56	31	-20	3	49	0.65	+ 0.10	0.52	7.0	5	6	11	14	s.	U. S. Weather Bureau.													
Thurman §.	Fremont.	14	25.0 + 0.8	66	29	-23	3	51	0.55	-0.09	0.50	5.0	2	8	8	15	nw.	C. R. Paul.														
Washita §.	Cherokee.	1,157	13	20.3	57	31	-35	3	45	0.50	+ 0.02	0.40	5.0	2	12	6	13	s.	H. L. Felter.													
Woodburn §.	Clarke.	961	12	23.3	62	10	-15	3	52	0.51	-0.63	0.20	3.5	4	8	6	17	sw.	C. B. McDonough.													
<i>Kansas.</i>																																
Abilene.	Dickinson.	1,157	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.38	-0.34	0.18	1.6	3	4	15	12	se.	T. W. Sherman.										
Agricultural College.	Riley.	1,100	53	32.1 + 6.2	70	29	-13	3	53	0.61	-0.19	0.45	1.1	3	16	5	10	sw.	Prof. J. O. Hamilton.													
Alton.	Osborne.	1,651	9	32.0	79	10	-21	3	60	0.0	.....	T.	0	0	15	6	10	nw.	H. A. Storer.													
Atchison.	Atchison.	973	20	30.9 + 3.3	64	11	-12	3	53	1.60	+ 0.47	1.40	2.0	2	12	3	16	w.	Prof. M. F. Troxell.													
Baker.	Brown.	1,182	11	28.9	63	29	-16	3	44	0.42	.....	0.30	3.0	2	4	4	23	s.	E. A. Bastien.													
Beloit.	Mitchell.	1,383	16	.....	.....	.....	.....	.....	.....	.....	.....	0.14	-0.27	0.14	0.4	1	12	5	14	sw.	Frank A. Slack.											
Blakeman.	Rawlins.	2,994	14	30.8	74	10	-28	3	63	0.03	-0.23	0.02	T.	2	19	6	6	sw.	C. L. Henderson.													
Blue Rapids.	Marshall.	1,105	5	32.0	70	10	-14	3	57	0.09	.....	0.05	.....	1	11	0	20	.....	M. Norton.													
Centralia.	Nemaha.	1,256	2	29.0	67	31	-15	3	51	0.89	.....	0.57	0.2	3	13	2	16	sw.	N. S. Hazen.													
Chapman.	Dickinson.	1,113	7	32.6	73	10	-16	3	59	0.53	.....	0.53	0.20	1	13	7	11	s.	Dr. R. McShea.													
Clay Center.	Clay.	1,203	10	31.0	74	10	-18	3	59	0.01	.....	0.01	0.1	1	11	0	20	sw.	O. L. Slade.													
Colby.	Thomas.	3,138	20	32.9 + 4.0	71	10	-22	3	58	0.26	+ 0.04	0.26	3.0	1	22	4	5	sw.	E. V. Snell.													
Concordia.	Cloud.	1,398	27	30.6 + 6.2	78	10	-14	3	57	0.09	-0.63	0.04	0.4	4	2	14	15	s.	U. S. Weather Bureau.													
Densmore.	Norton.	2,200	2	31.2	76	10	-18	2	66	0.03	.....	0.03	0.2	1	11	17	3	nw.	F. S. Griffith.													
Dresden.	Decatur.	2,731	17	32.6 + 3.2	74	10	-20	3	62	0.22	-0.09	0.20	1.8	2	17	6	8	sw.	Jacob Bock.													
Ellsworth.	Ellsworth.	1,537	7	31.7	76	10	-24	3	62	0.20	.....	0.08	0.03	3	11	16	4	s.	Geo. Saitz.													
Enterprise.	Dickinson.	1,144	9	33.6	76	10	-15	3	55	0.55	-0.65	-0.07	0.65	1	1	1	15	sw.	H. O. Wagner.													
Eskridge.	Wabaunsee.	1,412	16	31.6	69	31	-12	3	53	0.62	.....	0.36	0.5	6	9	8	14	s.	Geo. D. West.													
Farnsburn.	Lane.	2,850	20	34.8 + 3.9	75	31	-22	3	58	0.02	-0.18	0.04	0.2	1	18	6	7	sw.	C. M. Jenison.													
Fort Scott.	Bourbon.	857	36	36.3 + 3.4	73	29	-10	3	63	0.12	-0.49	0.04	0.75	5	3	6	17	s.	Mrs. S. C. Belden.													
Frankfort.	Marshall.	1,146	17	29.8 + 1.4	69	31	-15	3	56	0.15	-0.53	0.10	1.5	2	8	12	11	sw.	E. A. Shinn.													
Garnett.	Anderson.	950	5	35.0	68	26	-10	3	45	0.09	.....	0.04	T.	4	3	13	15	s.	Prof. H. P. Cady.													
Gove.	Washington.	2,750	22	34.0 + 4.2	75	10	-24	3	69	0.11	-0.27	0.05	1.2	3	17	12	2	nw.	Earl V. Bower.													
Hanover.	Jewell.	1,225	14	30.1	69	10	-16	3	57	0.20	-0.37	0.16	1.1	2	12	6	13	s.	A. J. Fredrickson.													
Harrison.	Jewell.	1,804	10	29.5 + 3.8	76	10	-21	3	62	0.00	-0.42	0.06	0.2	1	17	5	9	n.	R. M. Cauthorn.													
Hays.	Ellis.	2,000	43	32.6 + 2.5	78	10	-21	3	63	0.12	-0.49	0.04	1.0	2	10	14	5	sw.	J. L. Steele.													
Horton.	Brown.	1,188	22	29.4 + 2.3	73	29	-12	3	47	0.00	+ 0.02	0.75	5	3	6	9	16	s.	C. J. Norton.													
Jewell.	Allen.	1,540	6	32.3	70	10	-10	3	48	0.41	-0.83	0.27	T.	0	15	7	9	s.	C. O. Hunt.													

TABLE 1.—*Climatological data for January, 1911. District No. 6—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Observers.			
				Mean.			Departure from the normal.			Greatest daily range.			Total.							
				Highest.	Date.	Lowest.	Highest.	Date.	Lowest.	Greatest daily range.	Total.	Greatest in 24 hours.	Total snowfall, unmeasured.	Greatest in 24 hours.	Total.	Number of partly cloudy days.	Number of cloudy days.	Number of clear days.		
<i>Missouri—Continued.</i>																				
Grant City.	Worth.	1,130	19	27.4	61	29	-12	3	45	0.78	-0.23	0.54	T.	2	8	6	17	nw.	W. H. Campbell.	
Harrisonville §§.	Cass.	912	39	32.6	+ 5.3	68	26	-9	3†	46	0.42	-1.15	0.35	T.	2	6	4	21	sw.	A. J. Sharp.
Hazelhurst.	Livingston.	18									3.65	+ 2.32	3.03	1.0	6					W. H. Baker.
Hermann.	Gasconade.	482	37								0.81	-1.47	0.24	T.	9	5	5	21	s.	C. T. Maushund.
Houston.	Texas.	1,280	19	38.4	+ 4.1	74	11†	-6	3	42	0.35	-1.93	0.25	0.0	3	17	11	sw.	E. Dempsey.	
Jefferson City §§.	Cole.	629	30	33.6	+ 3.2	73	11	-10	3	50	0.94	-1.41	0.28	1.0	10	0	21	d.	Miss Emma Swift.	
Kansas City.	Jackson.	963	22	32.8	+ 6.6	66	26	-10	3	51	0.61	-0.52	0.35	0.1	8	6	8	17	sw.	U. S. Weather Bureau.
Kidder §§.	Caldwell.	1,017	21	29.1	+ 3.7	62	10	-11	3†	40	2.15	+ 0.78	1.45	1.0	7	9	4	18	sw.	J. F. Sharp.
Lamonté.	Pettis.	863	23	34.6		71	26	-10	3	45	0.39	-1.41	0.39	T.	1	8	1	22	sw.	Dr. W. E. Walker.
Lebanon.	Laclede.	1,265	23	37.8	+ 4.2	72	11	-7	3	39	0.50	-1.99	0.50	T.	1	9	9	13	w.	M. W. Serl.
Lexington §§.	Lafayette.	813	23	32.4	+ 4.9	67	26	-9	3	32	0.42	-1.19	0.15	0.0	5	13	1	17	s.	J. W. Keithley.
Liberty.	Clay.	864	23	32.5	+ 3.8	66	26†	-10	3	50	0.55	-0.56	0.53	T.	2	10 <sup>b</sup>	6 <sup>b</sup>	13 <sup>b</sup>	s. <sup>b</sup>	W. C. Wilmott.
Lockwood.	Dade.	1,088	17	39.4		75	11	-8	3	39	0.32	-1.26	0.18	T.	3	11	4	16	sw.	C. S. Crow.
Marshall.	Saline.	779	21	33.1	+ 4.6	69	26	-8	3	45	0.52	-1.41	0.22	T.	6	11	5	15	sw.	Dr. W. H. Black.
Marshfield.	Webster.	1,492	3	38.8		76	11	-8	3	59	0.10	.....	0.10	0.0	1	12	8	17	sw.	C. A. McCombs.
Maryville §§.	Nodaway.	1,160	21	23.2	0.0	62	29	-14	3†	40	0.93	-0.25	0.37	1.7	5	13	3	15	s.	J. R. Brink.
Mount Vernon.	Lawrence.	1,480	35	39.8	+ 4.8	70	27	-6	3	34	0.31	-1.89	0.20	0.0	5	16	4	11	sw.	J. R. White and Son.
Nevada.	Vernon.	860	17			17		-17							3	9	11	11	sw.	C. Jewell.
Oregon.	Holt.	1,113	56	26.8	+ 3.2	65	29	-19	3	55	0.83	-0.71	0.63	2.5	2	11	6	14	nw.	Tom Curry.
Osceola.	St. Clair.	738	12																W. E. Matthews.	
Pattonsburg.	Davies.																		Wm. Burton.	
Rolla.	Phelps.	1,092	30	38.2	+ 7.2	74	11	-7	3	47	0.50	-1.87	0.18	0.3	6	10	7	14	sw.	Prof. P. J. Wilkins.
St. Charles.	St. Charles.	614	33	35.2	+ 4.0	75	11	-3	3	45	0.70	-1.57	0.70	0.5	2	8	5	13	s.	L. C. Saeger.
St. Joseph.	Buchanan.	825	40	29.6		63	29	-11	3	44	1.76	+ 0.09	1.57	3.6	6	3	8	20	s.	U. S. Weather Bureau.
St. Louis City.	St. Louis City.	507	40	35.5	+ 4.5	74	11	-2	3	46	0.85	-1.42	0.28	0.5	7	6	6	19	s.	U. S. Weather Bureau.
Sublett.	Adair.	1,000	31	27.2	+ 0.8	62 <sup>c</sup>	9	-11 <sup>c</sup>	3	50 <sup>d</sup>	3.05	+ 1.36	1.50	0.5	4	3 <sup>d</sup>	4 <sup>d</sup>	20 <sup>d</sup>	ne. d	Lewis Springs.
Trenton.	Grundy.	812	16	28.8	+ 1.4	59	10	-10	3	43	3.30	+ 1.98	2.85	5.0	8	7	6	18	s.	W. H. Estes.
Unionville §§.	Putnam.	1,072	18	24.7	+ 0.4	60	10	-14	3	40	3.70	+ 1.62	2.10	4.0	4	7	3	21	s.	Geo. W. Davis.
Warrensburg.	Johnson.	883	33	35.2	+ 6.6	69	26	-9	3	44	0.14	-1.65	0.10	0.0	2	12	5	14	sw.	A. F. Smithson.
Warrenton §§.	Warren.	865	21	32.2	+ 2.7	72	11	-6	3†	46	0.58	-2.03	0.15	0.4	9	2	8	21	s.	Dr. John H. Frick.
Warsaw.	Benton.	700	7	37.7		76	31	-8	3	42	0.61	.....	0.29	T.	5	7	12	12	ne.	Dr. J. R. Smith.
Wheatland.	Hickory.	920	19								0.50	-1.52	0.50	0.0	1	11	6	14	s.	Mrs. S. A. Jackson.

<sup>a, b, c, etc.</sup>, indicate, respectively, 1, 2, 3, etc., days missing from the record.

\* Precipitation included in that of the next measurement.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

‡ Separate dates of falls not recorded.

§ Data from standard instruments not supplied by the U. S. Weather Bureau.

§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

†† Estimated by observer.

†† Precipitation for 24 hours on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for January, 1911. District No. 6, Missouri Valley.*

TABLE 2.—*Daily precipitation for January, 1911. District No. 6—Continued.*

TABLE 2.—*Daily precipitation for January, 1911. District No. 6—Continued.*

TABLE 2.—*Daily precipitation for January, 1911. District No. 6—Continued.*

TABLE 2.—*Daily precipitation for January, 1911. District No. 6—Continued.*

Stations.	River basins.	Day of month.																														Total.				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Nebraska—Contd.</i>																																				
Plymouth	Blue.	T.																																T.	0.45	
Purdum.	Loup.	.20																																	0.55	
Ravenna.	do.	.25																																	0.14	
Red Cloud.	Republican.	.08	.06																																0.40	
St. Libery.	Loup.	.40																																	0.10	
St. Paul.	do.	.10																																	0.40	
Santee.	Missouri.	.30	.10																																0.75	
Sargent	Loup.	.50																																	0.40	
Schuylerville.	Platte.	* .40																																	0.57	
Scottsbluff.	North Platte.	.10	T.	.05	.03	.03	T.		T.	.06																							0.30			
Seward	Blue.	.30																																0.06		
Sheridan.	Loup.	T.																																0.28		
Sidney.	South Platte.	.03																																0.30		
Springview.	Niobrara.	.20																																0.45		
Stanton.	Elkhorn.	.40																																0.32		
Stratton	Republican.	.10	.22																															T.	0.15	
Superior	do.	T.																																	0.30	
Syracuse.	L. Nemaha.	.30																																	0.20	
Tecumseh.	G. Nemaha.		.10																																0.15	
Tekamah.	Missouri.	.15																																	0.40	
Tobias.	Blue.	.32																																	0.37	
Valentine.	Niobrara.	.32																																	0.40	
Wahoo.	Platte.	.40																																	0.40	
Wakefield.	Elkhorn.	.35																																	0.37	
Walthill.	Missouri.	.20																																	0.40	
Watertown.	Platte.	.20																																	0.10	
Wauneta.	Republican.	.20																																	0.33	
Weeping Water.	Missouri.	.20	.11																																0.10	
Westpoint.	Elkhorn.																																			0.40
Wisner.	do.	.10																																		0.57
York.	Blue.	.40																																		0.75
<i>Iowa.</i>																																				0.13
Afton.	Grand.	.40																																		0.75
Allerton.	Chariton.	.23	T.																																	1.13
Alton.	Floyd.	.40																																		0.82
Audubon.	Nishnabotna.	.20																																		0.35
Bedford.	Missouri.	.30																																		0.57
Centerville.	Chariton.	.05																																		0.77
Chariton.	do.	.25	T.																																	1.52
Clarinda	Nodaway.	.30	.10																																	0.56
Corning.	do.	.30																																		0.50
Corydon.	Chariton.	.20	.01																																	1.05
Council Bluffs.	Missouri.	.20																																		0.51
Creston	do.	.16	.20																																	0.44
Cumberland.	Nodaway.	.40																																		0.04
Denison.	Missouri.	.10	.05																																	0.21
Elliott.	Nishnabotna.	.20																																		0.20
Greenfield.	Nodaway.	T.																																		0.11
Harlan.	Nishnabotna.	.29	T.																																	0.39
Inwood.	Big Sioux.	.20																																		0.40
Lamoni.	Grand.	.20	T.																																	0.91
Larrabee.	Little Sioux.	.20	.15		T.	.10																													0.55	
Le Mars.	Floyd.	.18																																		0.35
Lenox.	Missouri.	.20	T.																																	0.29
Leon.	do.	.75	T.																																	1.30
Little Sioux.	Little Sioux.	.40																																		0.40
Logan.	Missouri.	.22	.15																																	0.42
Massena.	Nodaway.	.35	T.	T.	T.																															1.10
Mount Ayr.	Grand.	.25																																		0.53
Murray.	do.	.20																																		0.22
Odebolt.	Missouri.	.30</td																																		

TABLE 2.—*Daily precipitation for January, 1911. District No. 6—Continued.*

## MONTHLY WEATHER REVIEW.

JANUARY, 1911

TABLE 3.—Maximum and minimum temperatures at selected stations for January, 1911. Section No. 6, Missouri Valley.

Date.	Wyoming.														Montana.																
	Basin.		Cheyenne.		Fort Laramie.		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings.		Dillon.		Havre.		Helena.		Lewis-town.		Malta.				
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
1.			17	-18			16	-18	30	-18	22	-14	-5	-17	2	-16	13	-10	28	-11	-13	-32	-6	-16	12	-20	-8	-29			
2.			4	-19			5	-26	5	-28	2	-18	7	-27	1	-26	11	-22	12	19	21	-33	19	-20	10	-25	-10	-39			
3.			29	4			36	-18	30	-15	20	-4	40	0	18	1	12	-6	37	12	36	20	35	19	42	10	35	-17			
4.			37	12			44	4	32	18	35	12	49	11	25	13	41	12	40	18	40	7	44	34	40	22	25	9			
5.			39	30			44	21	34	22	38	22	48	25	30	21	46	27	37	20	33	23	40	35	43	20	39	19			
6.			37	14	35	18			45	14	32	12	37	16	39	20	31	19		25	40	20	38	24	40	31	38	19	35	15	
7.			38	16	43	27			47	15	34	12	45	18	48	29	36	26	44	31	46	25	42	18	44	30	40	21			
8.			37	17	39	24			42	22	32	16	46	26	32	16	32	20	43	26	45	22	30	1	31	22	33	20			
9.			56	20	54	26			49	22	38	14	41	27	54	17	36	28	44	26	44	20	1	-13	40	-10	32	-7	0	-13	
10.			33	11	52	28			43	17	40	20	44	26	18	-10	33	14	53	-4	32	18	-13	-29	-5	-15	21	20	-11	-28	
11.			40	6	35	19			34	17	46	20	31	21	39	-10	26	14	-3	-20	32	15	-21	-35	-1	-26	-9	-31	-22	-39	
12.			31	-10	48	19			44	34	32	14	43	24	41	-21	26	-4	9	-21	30	-6	-22	-31	-17	-27	31	-25	-19	-30	
13.			6	-11	54	28			47	38	33	-10	44	31	-1	-18	32	-2	-16	-21	24	-3	-12	-28	-5	-19	22	-10	-14	-28	
14.			20	-3	47	30			45	35	32	8	43	31	23	-2	29	17	4	-25	34	2	-14	30	3	40	7	-14	32		
15.			24	0	42	28			47	25	32	10	42	32	23	7	33	21	19	-7	35	8	-2	-24	14	-7	32	10	-3	-32	
16.			38	13	44	22			44	14	34	18	41	23	36	12	28	9	28	-11	36	12	9	-13	22	8	37	5	15	-21	
17.			40	1	41	16			37	5	36	10	35	9	34	5	30	2	33	-8	34	13	26	-16	22	5	42	21	7	-18	
18.			37	4	47	29			43	8	32	12	36	9	50	20	32	13	38	-5	41	25	27	-3	45	14	44	29	7	-5	
19.			42	14	55	35			54	18	36	16	44	26	57	26	34	29	43	11	38	24	41	-1	46	29	32	12	30	4	-4
20.			34	12	51	21			48	25	34	20	43	22	43	7	35	4	46	28	39	25	8	-11	29	23	32	14	29	-15	
21.			34	10	25	9			29	4	24	5	24	4	25	-4	16	-5	31	-5	40	20	2	-18	28	20	25	3	1	-23	
22.			26	-4	22	1			28	-4	24	0	19	-4	27	-11	13	-1	25	-6	37	14	26	-19	30	14	28	11	3	-23	
23.			28	-9	41	7			33	-4	38	0	30	9	26	-14	24	-4	28	6	33	-6	28	8	37	9	40	10	36	35	
24.			36	-2	47	19			54	4	50	20	44	22	32	-3	35	13	40	0	36	4	24	6	34	19	44	11	19	3	-3
25.			54	17	58	29			52	31	51	13	46	31	42	12	38	28	42	10	40	15	8	-10	39	23	32	10	14	-1	
Mns.			38.4 <sup>a</sup>	9.5 <sup>b</sup>	42.7	20.9			42.0	14.2	36.5	11.3	37.6	19.1	33.9	5.2	28.9	12.6	30.0 <sup>c</sup>	3.2	36.9	12.9	13.7	-10.5	26.5	9.2	32.9	4.0	9.8 <sup>b</sup>	-15.8 <sup>b</sup>	

Date.	Montana.				North Dakota.								South Dakota.															
	Miles City.		Poplar.		Berthold Agency.	Bismarck.	Dickinson.	James-town.	Williston.	Aber-deen §§	Huron.	Kadoka.	Kimball.	Lemmon.	Pierre.	Rapid City.												
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1.	-4	-17	-11	-26	-10	-22	-12	-26	-9	-23	-10	-16	-14	-27	-4	-15	-2	-13	8	-14			-3	-17	-4	-15	-3	-14
2.	0	-24	-12	-32	0	-29	-10	-28	-5	-28	-20	-25	-11	-31	-8	-21	-9	-22	-6	-21			-5	-26	-3	-18	-1	-14
3.	40	-10	34	-23	34	-30	33	-22	-2	-25	40	-25	-3	-32	32	-25	27	-30	31	-29	35	-20	34	-21	36	41	-14	
4.	34	20	25	3	27	-1	8	-1	32	3	-3	4	-4	10	-3	10	-25	24	2	33	21	34	8	26	13	47	28	
5.	38	30	30	14	30	0	19	4	32	7	-1	-8	28	5	10	-4	15	3	40	20	34	10	38	14	49	24		
6.	42	19	32	17	31	-8	32	1	38	9	21	-1	30	5	18	-7	30	30	1	39	22		37	13	46	13	43	28
7.	43	26	32	11	30	9	31	11	37	7	21	2	28	8	31	-3	38	7	45	24		36	9	43	22	48	26	
8.	36	22	23	4	28	-6	15	-3	32	3	4	-8	26	-4	27	-2	32	3	50	22		35	9	40	19	40	24	
9.	30	28	11	-13	13	-15	37	-11	38	-2	6	-3	11	-17	34	-1	39	5	57	20		45	15	56	20	62	23	
10.	6	-13	-13	-24	-13	-23	0	-20	4	-20	4	-21	-29	-9	-10	35	-10	42	-4		17	-17	20	-9	58	-1		
11.	10	-14	-20	-31	5	-34	-9	-26	3	-24	-13	-25	-13	-29	-2	-19	-3	-16	6	-6			-3	-20	-1	-10	20	-1
12.	-4	-20	-25	2	-24	-12	-21	-1	-23	-13	-19	-27	-9	-20	-10	-19	10	-15	29	5			-3	-19	-8	-16	49	-13
13.	-10	-23	-18	-27	3	-26	-15	-23	-11	-23	-16	-22	-17	-27	-9	-20	-9	-17	1	-16			-12	-22	-5	-16	9	-13
14.	14	-14	0	-27	35	-22	7	-22	13	-21	-3	-21	-2	-22	-1	-20	10	-16	12	-12			14	-16	7	-11	24	-8
15.	12	-3	-10	-27	24	-26	8	-11	14	-9	-3	-18	1	-20	10	-18	17	-8	28	0		17	8	22	1	36	14	
16.	20	10	2	-12	45	-16	11	-10	26	-3	4	-18	12	-5	18	-8	18	7	29	23		19	6	32	15	46	19	
17.	15	-11	10	-10	46	-23	16	-18	22	-15	4	-18	24	-10	12	-1	19	8	34	6		20	-10	28	7	38	16	
18.	34	-2	16	-2	52	-7	18	0	27	-1	8	-3	13	-7	26	-20	35	7	55	18		36	10	53	8	58	22	
19.	23																											

TABLE 3.—Maximum and minimum temperatures at selected stations for January, 1911. Section No. 6—Continued.

Date.	South Dakota.				Colorado.				Nebraska.												Oakdale.		Omaha						
	Sioux Falls.		Water-town.		Yankton.		Denver.		Wray.		Alma.		Bridge-port.		Grand Island. §§		Hay Springs.		Hebron.		Lincoln.		North Platte.		Oakdale.		Omaha		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
1.....	28	-10	0	-15	6	-12	22	-6	21	-5	21	-3	25	-9	3	-6	16	-16	30	-6	28	-7	10	-10	0	-11	32	-5	
2.....	13	-11	-7	-19	-10	-17	5	-17	10	-21	1	-13	3	-18	-7	-17	-12	-23	-4	-10	-5	-12	-1	-19	-9	-18	3	-10	
3.....	17	-23	5	-28	27	-20	40	-13	36	-21	21	-22	33	-27	25	-10	32	-28	11	-17	16	-16	30	-22	20	-29	12	-14	
4.....	21	4	20	-3	34	8	51	12	45	13	43	13	40	10	36	-7	31	20	32	9	30	16	42	16	32	13	26	12	12
5.....	12	0	1	-5	35	10	49	34	46	23	52	20	40	27	45	25	38	22	47	22	45	20	46	24	39	12	44	17	
6.....	20	2	18	-10	39	9	45	26	43	26	51	23	40	18	48	27	35	20	50	22	45	25	44	23	38	19	42	20	
7.....	37	12	25	8	43	25	56	25	52	27	58	22	52	15	50	26	45	19	50	27	50	30	56	22	39	21	49	35	
8.....	20	0	33	-3	38	14	47	32	43	17	45	26	36	17	40	30	35	18	35	29	43	27	43	20	32	24	39	27	
9.....	39	10	35	-5	44	14	61	32	58	24	53	26	58	22	48	26	54	21	50	26	49	27	51	26	40	20	46	26	
10.....	40	2	35	-14	53	-6	60	33	73	34	76	25	67	23	64	32	58	10	66	37	62	8	69	13	50	-1	58	8	
11.....	22	-10	-10	-19	6	-8	41	27	51	14	25	4	40	15	14	0	38	7	37	3	13	1	31	3	7	-4	10	0	
12.....	24	-8	-6	-22	34	-10	59	26	67	22	37	10	52	17	40	10	37	5	29	10	30	-2	32	-4	25	6	25		
13.....	5	-15	-1	-17	1	-13	56	23	46	8	12	0	37	-3	12	-6	33	-10	12	0	10	-2	28	-3	4	-11	8	-1	
14.....	9	-14	15	-8	5	-10	60	33	66	15	29	5	51	12	12	-2	50	-4	18	7	16	0	37	4	7	-9	12	-2	
15.....	15	7	12	0	20	-2	55	29	39	25	26	11	38	16	28	8	33	7	24	9	23	6	33	15	25	0	21	5	
16.....	20	10	14	1	23	14	59	27	43	18	25	17	43	18	24	18	38	17	23	19	23	18	33	16	25	11	22	16	
17.....	27	12	12	1	21	14	42	26	49	22	40	4	45	10	30	12	43	15	33	17	27	19	42	18	23	12	23	16	
18.....	40	14	31	-2	46	18	59	24	50	22	50	8	54	5	52	16	52	20	40	15	39	15	58	15	46	11	37	20	
19.....	22	10	21	-1	24	11	66	38	60	27	62	13	62	15	60	28	50	16	54	26	55	20	63	18	34	17	49	27	
20.....	26	17	21	-2	33	8	62	25	58	28	52	24	37	27	45	32	45	20	51	35	48	25	43	25	40	18	45	22	
21.....	24	0	13	-13	20	6	34	20	36	19	36	24	28	3	34	19	30	20	35	20	26	15	31	20	27	11	24	14	
22.....	30	10	18	-5	35	16	35	18	38	15	42	24	25	-12	40	18	28	8	41	21	42	22	29	6	30	7	41	17	
23.....	42	16	30	-3	45	15	46	12	46	13	48	4	35	-7	45	16	40	-2	41	12	46	17	43	4	42	-2	46	21	
24.....	40	19	34	7	48	26	58	23	61	11	48	19	44	10	44	26	50	11	44	25	49	30	52	6	41	22	50	32	
25.....	42	32	34	27	43	36	66	38	71	20	51	32	55	20	42	34	58	26	46	36	45	38	48	20	40	33	44	38	
26.....	38	25	35	21	40	26	57	33	61	27	49	23	41	25	41	28	56	35	44	30	42	32	55	25	35	25	44	33	
27.....	25	12	22	3	26	14	54	31	52	25	39	23	45	27	38	19	44	17	32	28	34	24	37	22	25	18	33	25	
28.....	30	5	33	-2	37	14	58	27	63	20	45	13	55	28	42	20	53	26	33	22	37	24	47	18	35	14	37	25	
29.....	43	6	31	3	49	12	66	33	66	26	65	23	67	27	64	30	50	32	67	27	64	20	45	19	43	19	51	19	
30.....	34	7	30	-6	42	10	69	45	60	28	42	16	63	37	45	20	65	25	45	19	43	19	52	25	44	15	36	20	
31.....	57	20	41	22	57	28	66	47	61	33	71	28	64	35	62	37	70	35	57	39	69	32	58	34	54	34	54	34	
Mns..	27.8	5.2	19.2	-3.5	31.1	8.1	51.7	24.6	50.7	17.9	42.4	14.3	43.7	12.3	37.9	16.4	41.5	12.6	38.3	17.9	36.5	16.8	42.3	13.1	30.7	9.3	34.4	16.4	

Date.	Nebraska.				Iowa.				Kansas.				Missouri.													
	Valentine.		Clorinda. §§		Sibley. §§		Sioux City.		Colby.		Concordia.		Salina.		Topeka.		Wakeeney.		Columbia.		Kansas City.		St. Louis.		Unionville. §§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	-4	-18	28	-5	-5	16	-8	0	4	32	-3	18	-1	46	-3	40	8	52	7	48	-3	48	28	43	20	
2.....	-8	-22	-5	-8	-7	-11	-7	-16	0	-17	-1	-8	4	-4	2	-7	8	-13	7	-2	28	3	5	-5		
3.....	34	-24	21	-16	15	-32	10	-20	36	-22	18	-14	17	-21	14	-10	33	-20	5	-8	9	-10	7	-1	15	
4.....	34	21	34	-16	4	-33	28	5	45	18	39	18	44	22	36	14	34	5	33	4	24	22	-13	13		
5.....	40	24	43	21	9	-4	30	7	51	23	52	29	58	17	53	24	54	24	50	17	44	20	46	8		
6.....	41	20	35	14	35	-4	35	3	43	22	52	30	56	19	50	29	48	21	48	30	46	24	43	4		
7.....	45	22	50	13	36	2	42	21	49	14	57	30	60	22	55	33	58	28	53	34	53	37	48	8		
8.....	39	28	34	32	19	6	42	13	43	20	44	30	50	22	47	31	53	24	47	35	47	30	38	24		
9.....	53	29	45	18	37	-3	43	18	54	22	54	27	52	21	51	25	53	22	47	19	51	26	41	15		
10.....	61	0	59	20	43	19	49	0	71	28	78	21	75	35	66	40	75	33	68	38	65	39	61	31	60	
11.....	20	-4	20	5	-1	-12	5	-3	56	9	21	8	72	12	66	14	68	5	67	17	65	15	74	28	28	
12.....	35	-12	24	5	26																					